

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference LA/1-23038	FOR FURTHER ACTION	See item 4 below
International application No. PCT/EP2005/051324	International filing date (<i>day/month/year</i>) 23 March 2005 (23.03.2005)	Priority date (<i>day/month/year</i>) 01 April 2004 (01.04.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant CIBA SPECIALTY CHEMICALS HOLDING INC.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Date of issuance of this report 04 October 2006 (04.10.2006) Authorized officer <div style="text-align: center; font-size: 1.2em;">Ellen Moyse</div> e-mail: pt05@wipo.int
---	--

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 30 SEP 2005
PCT
WIPO
20/10

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2005/051324

International filing date (day/month/year)
23.03.2005

Priority date (day/month/year)
01.04.2004

International Patent Classification (IPC) or both national classification and IPC
C07C211/58, C08K5/18, C10M141/06

Applicant
CIBA SPECIALTY CHEMICALS HOLDING INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the International application

2. FURTHER ACTION

If a demand for International preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Butkowskyj-Walkiw, T

Telephone No. +49 89 2399-8594



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/051324

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/051324

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-18
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-18
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V.

- 1 Reference is made to the following documents:
- D1 : US 6 315 925 B1 (AEBLI BEAT MICHAEL ET AL) 13 November 2001 (2001-11-13)
 - D2 : FR 2 832 417 A (BP CORPORATION NORTH AMERICA INC) 23 May 2003 (2003-05-23)
 - D3 : EP 0 387 979 A (NIPPON OIL CO., LTD; NIPPON OIL COMPANY, LIMITED) 19 September 1990 (1990-09-19)
 - D4 : P. SNIEGOSKI ET AL: "Quantitative TLC Analysis of Amine Antioxidants in High-temperature Jet Engine Lubricants" JOURNAL OF CHROMATOGRAPHIC SCIENCE, vol. 15, 1977, pages 328-329, XP009054421
 - D5: US-A-2 530 769

In the light of the documents cited in the search report the present claims 1-18 can be considered as being novel (Art. 33(2) PCT).

However, the subject-matter of claims 1-8 and 12-14 cannot be considered as being inventive (Art. 33(3) PCT) as the object of the present application, namely to provide compositions of alkylated diphenylamines that have improved properties, such as solubility in mineral oil, for the intended technical applications, for example additives to lubricants, has already been achieved by D3 (example 3; page 2, line 29 - page 3, line 44) alone or a combination of D1 (claims 1-6) and D2 (page 2, lines 25-30; page 6, lines 1-32; claims 1-19; examples 1-4) in a very similar manner.

Furthermore, the subject-matter of claim 9 and claims 15-18 referring to the additive mixture alone (which has the same object as claims 1 and 2) cannot be considered as being inventive over D3 and D4 (see introduction).

In the light of D5 (col. 1, lines 13-24; claims 1-2) the subject-matter of the product by process claims 10 and 11 cannot be considered as being inventive.

Re Item VIII

Although claims 1,2,9-11 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection.

It seems that claim 2 contains a clerical error as it refers to compound B and C without citing compound A.

The independent claim 9 refers to compounds I and II without illustrating their structure. The same objection refers to claims 15-18.

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 30 SEP 2005
PCT
WIPO
20/10

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2005/051324

International filing date (day/month/year)
23.03.2005

Priority date (day/month/year)
01.04.2004

International Patent Classification (IPC) or both national classification and IPC
C07C211/58, C08K5/18, C10M141/06

Applicant
CIBA SPECIALTY CHEMICALS HOLDING INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Butkowskyj-Walkiw, T

Telephone No. +49 89 2399-8594



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/051324

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/051324

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-18
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-18
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V.

- 1 Reference is made to the following documents:
- D1 : US 6 315 925 B1 (AEBLI BEAT MICHAEL ET AL) 13 November 2001 (2001-11-13)
 - D2 : FR 2 832 417 A (BP CORPORATION NORTH AMERICA INC) 23 May 2003 (2003-05-23)
 - D3 : EP 0 387 979 A (NIPPON OIL CO., LTD; NIPPON OIL COMPANY, LIMITED) 19 September 1990 (1990-09-19)
 - D4 : P. SNIEGOSKI ET AL: "Quantitative TLC Analysis of Amine Antioxidants in High-temperature Jet Engine Lubricants" JOURNAL OF CHROMATOGRAPHIC SCIENCE, vol. 15, 1977, pages 328-329, XP009054421
 - D5: US-A-2 530 769

In the light of the documents cited in the search report the present claims 1-18 can be considered as being novel (Art. 33(2) PCT).

However, the subject-matter of claims 1-8 and 12-14 cannot be considered as being inventive (Art. 33(3) PCT) as the object of the present application, namely to provide compositions of alkylated diphenylamines that have improved properties, such as solubility in mineral oil, for the intended technical applications, for example additives to lubricants, has already been achieved by D3 (example 3; page 2, line 29 - page 3, line 44) alone or a combination of D1 (claims 1-6) and D2 (page 2, lines 25-30; page 6, lines 1-32; claims 1-19; examples 1-4) in a very similar manner.

Furthermore, the subject-matter of claim 9 and claims 15-18 referring to the additive mixture alone (which has the same object as claims 1 and 2) cannot be considered as being inventive over D3 and D4 (see introduction) .

In the light of D5 (col. 1, lines 13-24; claims 1-2) the subject-matter of the product by process claims 10 and 11 cannot be considered as being inventive.

Re Item VIII

Although claims 1,2,9-11 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection.

It seems that claim 2 contains a clerical error as it refers to compound B and C without citing compound A.

The independent claim 9 refers to compounds I and II without illustrating their structure. The same objection refers to claims 15-18.